Item No.	Reference	Comment made by	Comment	Response
GENERAL	COMMENTS			
1	General	Forsythe, US Fish & Wildlife	In general I found the document to be satisfactory and sufficient for its intended purpose.	No comment necessary.
2	General	Forsythe, US Fish & Wildlife	processes and possible inputs).	Additional clarification will be provided in the revised submittal. The selection was made based on the previous data collected at the site. Clarification will be provided in the revised RI work plan.
3	General	Forsythe, US Fish & Wildlife	and location of samples (are they sufficient to define nature and extent).	The sampling plan proposed was a judgmental sampling plan. A judgmental sampling strategy is an EPA accepted strategy. The sample locations were determined based on data collected previously at the site. Additional tiers of sampling are planned to be conducted if necessary as part of the RI.
4	General	Sarah Schreier, TCEQ	wide groundwater Affected Property Assessment Report (APAR) that has been submitted to TCEQ shows that the contaminant plume from the active Huntsman plant intersects the East-West trending portion of Star Lake Canal. TCEQ is concerned that this groundwater plume	Groundwater in the area referenced is not believed to be in communication with the surface water at the site. However, to evaluate this potential, the existing groundwater data from the facility APAR will be incorporated into the revised RI work plan. Additional groundwater investigation is planned for the facility APAR and that additional surface water and sediment samples and analyses to address the issue and area of groundwater concern will be included in the revised RI work plan.
5	General	Larry Champagne, TCEQ Remediation Division	It appears that all proposed samples will be collected from the area of interest and none from background locations. It is understood that background samples should not be used to screenout COPECs in the EPA risk assessment process. However, background samples would contribute to the site characterization and should be collected.	See response to Item No. 3.
6	General	Larry Champagne, TCEQ Remediation Division	It is inappropriate to identify intermittently inundated matrix within Molasses Bayou as "wetland soil" based solely on the rationale (I.e., periodic inundation) provided. According to this logic, all intertidal areas with active sediment-based ecological communities would be "soil based." All matrix material within Molasses Bayou should be categorized as sediment unless more comprehensive rationale regarding duration of inundation, in conjunction with assemblages of flora and faunal indicator species, can be provided. Similar clarification should also be provided for any bank or remnant dredge material described as "soil."	All intermittently inundated soil areas within the "site boundary" will be referred to as wetland sediments.
7	General	Larry Champagne, TCEQ Remediation Division		information will be included in the evaluation.
8	General	Larry Champagne, TCEQ Remediation Division	and extent or risk assessment purposes because detection limits exceeded ecological screening benchmarks. However, it seems logical to utilize these data to assist in the identification of site	The sediment and surface water data collected from previous investigations was used in the development of proposed sample locations. A description of the previous investigations and the results and use as a basis for the work plan and sample and analysis plan (SAP) will be prepared and included in the revised RI work plan.

Item No.	Reference	Comment made by	Comment	Response
9	General	Shewmake, USEPA Ecological Risk Assessor	The references to ARARs on pages 1-10, 2-2, 3-3 also should be modified.	Agreed. ARAR discussion will be removed from the SLERA section of the RI work plan and replaced with ecological benchmarks. Potential ARARs will be identified in Section 1 of the revised RI work plan.
10	Section 6	Sarah Schreier, TCEQ	Section 6, Sampling and Analysis Plan. Is GPS location adequate for future use of the sampling data, or will the sample locations need to be surveyed after sample collection? If a need for a survey is anticipated, then marking sample locations for the survey should be included in this plan. In general, please discuss the logic and reasoning used to set sample quantity and distribution (I am not looking for a statistics answer here - just documentation of the thought process). Discuss areas that have less coverage and what reasoning led to the decision not to sample in those areas. Several areas seem devoid of samples in Molasses Bayou, and Star Lake Canal and Gulf States Canal seem to have lower sample location densities than Molasses Bayou and Jefferson Canal. Please explain the reasoning.	GPS locations are adequate to about ± 0.5 m (or less). The site sediments are dynamic in space and time. The accuracy of sample location by a land survey precision does not provide any additional scientific reliability. Sample location and rational were based on the data obtained during previous sampling events at the site, along with knowledge of site hydrology.
11	Section 7	Sarah Schreier, TCEQ	Section 7, Schedule. Were physical site access restrictions caused by vegetation density, and likelihood of heat and faunal related Health & Safety concerns considered when selecting projected dates for field work?	Health and Safety issues associated with this site were considered. Site sample collection team personnel will employ adequate health and safety procedures.
SPECIFIC	COMMENTS; Section	1, Introduction		1
12	WP, Page 1-2, § 1.2, Site Characterization	Forsythe, US Fish & Wildlife Service	At this point groundwater has not been discussed (previous studies) and thus should be listed as a media of concern. Alternatively, the sentence could be changed to read, "abiotic media (surface water, sediment, soil, groundwater)."	See response to Item No. 4.
13	WP, Page 1-2, § 1.2, SLERA	Forsythe, US Fish & Wildlife Service	There should be some revision to reflect that the objective of the SLERA is to "use site-specific data," not necessarily requiring new sampling (at this point in the document).	The RI work plan indicates that the historical data are insufficient for ecological risk assessment purposes and that new data will be collected. The revised RI work plan will clarify this.
14	Section 1.2, page 1-2	Larry Champagne, TCEQ Remediation Division	TCEQ's ecological risk assessment guidance should also be listed under the potential SLERA guidance.	The TCEQ guidance will be cited in the revised RI work plan.
15	Page 1-3	Sarah Schreier, TCEQ	Please reference applicable TRRP guidance in the list under Tier 1 Human Health Risk Assessment. Sufficient data must be collected to run a parallel path risk assessment under TRRP to determine whether there are specific chemicals of concern (COCs) on this site for which TRRP provides more stringent criteria. (TRRP Guidance Numbers 19, 21, 22, 24, 25, 27 should be considered.)	The TRRP guidance will be cited in the revised RI work plan. Sufficient data will be collected to conduct a parallel path risk assessment that complies with TRRP guidance.
16	Page 1-7, Section 1.4.4	Shewmake, USEPA Ecological Risk Assessor	This section refers to Exhibits that I could not locate in this document.	Exhibits were submitted in the Errata Sheet provided to the agencies on April 3, 2006.
17	Section 1.4.4	Sarah Schreier, TCEQ	Consider adding a spot on one of the maps where the Rainbow Bridge Station is located.	The location of the Rainbow Bridge Station will be shown on a figure that will be included in the revised RI work plan.
18	Figure 1-1.	Sarah Schreier, TCEQ	Please add TCEQ to the organizational chart.	TCEQ will be added to a revised organizational chart to be included in the revised RI work plan.
19	Page 1-6, Figure 1-21	Shewmake, USEPA Ecological Risk Assessor	How was the area described as "area of potential concern" in figure 1-21 determined? It appears in this figure that the area is connected to other waterways. Is there a reason to believe that significant amounts of contamination could not have been transported to other areas? Why isn't the area where Star Lake Canal joins the Neches River included? What are the boundaries of this site? All of this information needs to be presented in this document.	The site outline is defined by the administrative order on consent (AOC). The AOC presented documentation that justified its definition. Based on previous sampling results there is no reason to believe that constituents have transported beyond the limits of the site.
20	Page 1-6, Figure 1-21	Shewmake, USEPA Ecological Risk Assessor	The picture in Figure 1-21 is good, but we need additional close-up maps showing details like where dredged sediments were deposited, where the solid waste landfill is, tributaries, outfalls, other water bodies and property lines.	The image will be modified and included in the revised RI work plan.

Item No.	Reference	Comment made by	Comment	Response
21	Page 1-7, Section 1.4.5	Shewmake, USEPA Ecological Risk Assessor	dredged sediments were placed on the banks of the canals are known. If all of these locations	The approximate locations of sediments dredged from Jefferson Canal will be further amplified and shown on a figure in the revised RI work plan. However, dredge areas are dynamic in space and time.
	Section 2, Historical	Data		
22	Page 2-1, 3rd bullet	Sarah Schreier, TCEQ	Please update this with information from the site-wide groundwater APAR that was submitted to TCEQ Corrective Action Program. Include a figure that shows the well locations and compliance points referenced here. Please indicate review status (i.e., under review, or approved by TCEQ) of any corrective action reports referenced.	See response to Item No. 4.
23	Page 2-2, 4th bullet	Sarah Schreier, TCEQ	Please indicate what the public health assessment concluded about all exposure pathways evaluated.	The statement regarding the public health assessment was a direct quote from the AOC. The 2001 Public Health Assessment completed by the Texas Department of Health concluded that constituents in the sediment, the consumption of fish, and drinking water from the area do not pose a public health hazard. The results of the public health assessment will be included in the revised RI work plan.
24	WP, Page 2-2, § 2.0, Public Health Assessment	Forsythe, US Fish & Wildlife Service	The summary provided indicates that the exposures evaluated were consumption of fish, drinking water, and incidental ingestion of sediments and surface water. However, the concluding statement says, "groundwater does not pose a risk." What were the results for the other exposure pathways?	See the response to Item No. 23.
25	Section 2.1	Sarah Schreier, TCEQ	Please include a tabular listing of all benchmarks used for comparison to historical data, and their sources. TCEQ historical data should be qualitatively useful for those data points that showed detections. At a minimum, those sample locations where TCEQ had detections should be resampled to obtain data of appropriate quality level for the intended use. Do not discount historical data that shows contaminants present.	Historical data was not discounted. It was the basis of the AOC. See response to Item No. 3 and Item No. 8.
	Section 3 Screening-	Level Ecological Risk As	sessment	
26	WP, Page 3-1, § 3.1, SMDP Outcomes	Forsythe, US Fish & Wildlife Service	Suggest using the terms, "acceptable risk, indeterminate risk, and unacceptable risk."	This will be addressed within the revised RI work plan.
27	WP, Page 3-3, § 3.3	Forsythe, US Fish & Wildlife Service	It appears as though the COPEC selection criteria, as explained here, is actually the exercise to be performed in Step 2 of the risk assessment process. It would be prudent to include a discussion here or prior (site history) detailing the facility processes and constituents associated with current/past operations; which may have been discharged and contributed to any contamination. An example that makes this apparent is the listing of pentachlorophenol (PCP) as a COPEC, without also listing the known contaminants of that product (dioxins/furans) that may also be present. In addition in this section mercury is described as an "inorganic" bioaccumulative. The form of mercury, methyl mercury, that is of bioaccumulative and biomagnification concern is actually an organic.	Discussion of facility processes and constituents is included in Section 1.4.5 of the RI work plan. See response to Item No. 8.
28	WP, Page 3-3, § 3.4, Threatened and Endangered Species	Forsythe, US Fish & Wildlife Service	Special status species should also be considered in the evaluation of receptors of concern if critical habitat for such species is documented to exist at the site.	If critical habitat is documented at the site and those species are likely to inhabit the site, then it is agreed that special status species will be considered.
29	WP, Table 3-2, Threatened and Endangered Species	Forsythe, US Fish & Wildlife Service	The Piping Plover (Charadrius melodus, E,T) is currently listed on the USFWS website for Jefferson Co Also, the Bald Eagle and Brown Pelican are federally listed species.	Tables in the revised RI work plan will be modified per discussions with the U.S. Fish and Wildlife and Texas Parks and Wildlife.

Item No.	Reference	Comment made by	Comment	Response
30	Section 3.4.1, page 3-6	Larry Champagne, TCEQ	Please revise Table 3-2 to show the brown pelican as a federal endangered species. This species is still listed as endangered on the Texas Gulf Coast although it may not be included in the Jefferson County list.	As part of the revision of the RI work plan the experts at the U.S. Fish and Wildlife will be contacted and the pelican will be added to the tables in the revised RI work plan.
31	Section 3.4.1, page 3-8	Larry Champagne, TCEQ Remediation Division	The statement that brown pelicans would not be found near or onsite is incorrect. Pelicans are likely to use this area and the surrounding areas for feeding or loafing. Also, the justification for eliminating the white-faced ibis is insufficient. Either provide a more convincing argument for elimination or assume this species is present. Please revise the text accordingly and add suitable surrogate species to the receptor list. If a receptor currently in use will act as a surrogate, please note that only NOAEL values should be used for that receptor.	This information will be provided in the revised RI work plan.
32	WP, Page 3-8, White- faced Ibis		Not sure that the rationale for eliminating further evaluation for this species is sufficient. If they are common to the county and area (as stated), but just have not been documented at the site (by TPWD), they should be retained since preferred habitat exists.	See response to Item No. 7.
33	WP, Page 3-8, § 3.4.2	Forsythe, US Fish & Wildlife Service	Can the observation of the muskrat be confirmed? Is it possible that it was a nutria?	Muskrats have been observed in the immediate vicinity of Star Lake Canal and associated wetlands.
34	Section 3.4.2, page 3-9	Larry Champagne, TCEQ Remediation Division	Site Specific Receptors of Concern and Figure 3-3. In order to maximize exposure, it is preferred that a green heron or other smaller-bodied shorebird be used in place of the great blue heron.	This change will be incorporated in the revised RI work plan.
35	Section 3.4.2, page 3-9	Larry Champagne, TCEQ Remediation Division	Site Specific Receptors of Concern. The characterization of the muskrat exposure is incorrect. Muskrats are primarily aquatic animals, burrowing into the sediments of marshes or river banks or shorelines. They feed primarily on aquatic vegetation. Therefore they will be exposed to contaminants primarily through aquatic vegetation, surface water, and sediments, not soil as indicate. Please revise accordingly.	This change will be incorporated in the revised RI work plan.
36	Section 3.4.2, page 3- 9	Remediation Division	Site Specific Receptors of Concern and Figure 3-3. The characterization of the raccoon exposure is incorrect. The raccoon feeds on aquatic prey (fish and benthic invertebrates) in addition to terrestrial prey. Thus its exposure to sediments needs to be evaluated in addition to its exposure to surface water and soil, both from incidental ingestion and from food chain transfer.	This change will be incorporated in the revised RI work plan.
37	Section 3.4.2	White, NOAA	Site Specific Receptors of Concern, pg 3-9. In order to conservatively assess the potential risk to receptors exposed to contaminants (which are likely to be primarily associated with sediments), I suggest modifying some of the receptors under consideration. Please substitute the green heron for the great blue heron (which is likely to be more conservative due to smaller body weight). Also consider adding sediment probing shore birds such as the spotted sandpiper or piping plover.	This change will be incorporated in the revised RI work plan.
38	WP, Page 3-10, § 3.5, ARARs	Forsythe, US Fish & Wildlife Service	For soils, suggest inclusion of EPA's EcoSSL's	This change will be incorporated in the revised RI work plan.
39	Section 3.5, page 3-10	Larry Champagne, TCEQ	The text here states that "no ARARs exist for evaluating effects on biota residing in sediments." This appears to contradict the statement made on p. 2-2 regarding the use of ER-Ls. Please clarify. Also, references to TCEQ ERA guidance should include the phrase " and most recent updates".	Any contradictory text will be removed from the revised RI work plan.

Item No.	Reference	Comment made by	Comment	Response
40	Section 3.6.1, pg 3- 11, pg 3-12 and Figure 3-2	Larry Champagne, TCEQ Remediation Division	The pathway from bank soil to mammals is identified as potentially complete but not evaluated. High percentages of incidental soil ingestion by raccoons and other mammals could be a significant part of the exposure, particularly if these soils (having originated from dredged sediments) house the highest COPEC concentrations. This pathway should be evaluated. There is also disagreement with the figure and the statement that "exposure of shorebirds and waterfowl to constituents in bank soil is shown as an incomplete pathway as these receptors are not expected to utilize this habitat." Depending on the definition of bank soil (see below), shorebirds and waterfowl may utilize this habitat when it is inundated. Since this deposited dredge material is a known source of contamination and risk, potential exposure of all appropriate receptors should be assessed.	
41	Section 3.6.1, pg 3-12	Larry Champagne, TCEQ Remediation Division	The characterization of wetland soil is not acceptable based on the rationale provided. Periodic inundation is common to many sediment-dominated environments such as intertidal estuarine and lacustrine marshes. The definition for matrix type should be based on common technical usage not unique to or limited to this RI. The document needs to clearly identify upland soil, bank soil, wetland soil, and sediment using standard definitions. As discussed below, the current distinction between sediment and wetland soil in this RI is problematic.	See response to Item No. 6.
42	Section 3.6.1, Figure 3-3	Larry Champagne, TCEQ Remediation Division	Figure 3-3 illustrates the confusion in the RI definitions of soil versus sediment. It clearly depicts the areas surrounding the canals as wetlands but then defines the substrate under the wetlands as soil since it is "only periodically inundated," whereas sediments are defined as being "permanently inundated." USFWS defines wetlands and their substrates as the following: "Wetlands are lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. For purposes of this classification, wetlands must have one or more of the following three attributes: (1) at least periodically, the land supports predominantly hydrophytes; (2) the substrate is predominantly undrained hydric soil; and (3) the substrate is nonsoil and is saturated with water or covered by shallow water at some time during the growing season of the year."	
42 cont.	Section 3.6.1, Figure 3-3	Larry Champagne, TCEQ	Substrate that occurs along the banks of these water bodies and under wetland vegetation should be considered sediments and treated as such. Receptors foraging in these areas should be examined for sediment exposure and COPECs present in this substrate should be evaluated against sediment benchmarks. Please revise the RI to more accurately describe the matrix prevalent in Molasses Bayou marsh and adjacent water bodies.	See response to Item No. 6.
43	Section 3.6.1	White, NOAA	Exposure Pathways, pg 3-12. The distinction between sediment and wetland soil in this RI is problematic. Wetland soils should be considered sediment.	See response to Item No. 6.
44	WP, Page 3-9	Forsythe, US Fish & Wildlife Service	Suggest using a wading bird of smaller size, such as the green heron or snowy egret. Please explain the selection of the mottled duck beyond having been observed. Will enough literature data be available to actually model exposure/effects to this species? Suggest replacing with the more commonly used (and data rich) dabbling duck, the mallard.	Explanation will be incorporated in the revised RI work plan.
45	WP, Figure 3-2, CSM	Forsythe, US Fish & Wildlife Service	It appears that the sediments are the original source of contaminants, as depicted. This figure should be revised to include the "true" original sources (facilities) via 'end of pipe discharge' and/or contaminated soil erosion/runoff.	The revised RI work plan will show the facilities in the CSM.
46	WP, Page 3-12, § 3.6.1	Forsythe, US Fish & Wildlife Service	If taken as stated, then receptors' exposure will be only modeled for mid-channel sediments. When in fact, many of the selected ROCs will be utilizing the shoreline, which as defined in the document, are not sediments (permanently covered with water).	Sample locations will be modified to include sediment samples from "shorelines" and these will be used in the overall assessment of potential impacts.

Item No.	Reference	Comment made by	Comment	Response
47	WP, Page 3-12, § 3.6.1, Potentially Complete	Forsythe, US Fish & Wildlife Service	Need further rationale to explain the elimination of bank soils as an exposure area for mammals. If the areas are significant enough to be used in modeling exposure to the marsh wren, then they should also be used for mammals.	Explanation will be incorporated in the revised RI work plan.
48	WP, Page 3-12, § 3.6.1, Incomplete	Forsythe, US Fish & Wildlife Service	Do not agree that shorebird exposure to bank soils is incomplete. At a minimum, as described, the erosion of these areas put them in direct contact with areas shorebirds will utilize for foraging. So, the exposure may be minimal (potentially complete) if these areas are small, but could also be significant if providing habitat for prey.	Explanation will be incorporated in the revised RI work plan.
49	WP, Page 3-14, 2nd	Forsythe, US Fish & Wildlife Service	Bank soils should be added to the list of media where the maximum concentrations are compared to screening levels/benchmarks and/or TRVs, as appropriate.	This change will be incorporated in the revised RI work plan.
50	Section 3.6.1 Pg 3-14	Larry Champagne, TCEQ Remediation Division	The text identifies wetland soils in reference to measurement endpoints. See applicable comments above.	See response to Item No. 6.
51	WP, Page 3-15	Forsythe, US Fish & Wildlife Service	Bioconcentration factor is abbreviated, "BCF", not BAF (bioaccumulation factor). Depending on how it was intended, BAF may actually be more appropriate for this situation. In addition, suggest replacing "no risk" with the phrase, "acceptable risk." The data and level of investigation will not be definitive enough to make the statement that "no risk" exists.	This change will be incorporated in the revised RI work plan.
52	Section 3.5	Shewmake, USEPA Ecological Risk Assessor	Section 3.5 of the work plan needs to be re-written, removing all references to ARARs, and should instead should focus on establishing the screening benchmarks that will be used. This section as currently written implies that ARARs and screening benchmarks are the same thing. ARARs can be used as benchmarks but ARARs are regulations and benchmarks are not. ARARs are considered when establishing remedial goals but are not part of the ERA.	See response to Item No. 9.
53	Section 3	Shewmake, USEPA Ecological Risk Assessor	When establishing a hierarchy for the selection of ecological benchmarks, Texas chronic WQS should be considered before NAWQC.	This change will be incorporated in the revised RI work plan.
54	Section 3.3, page 3-3	Shewmake, USEPA Ecological Risk Assessor	Page 3-3, Section 3.3: The section on selection of COPEC's should also state that all PAHs detected would be retained if any one detected PAH exceeds a screening level.	For the screening level, all PAHs will be retained for further evaluation if one PAH exceeds the screening level.
55	Section 3.5	Shewmake, USEPA Ecological Risk Assessor	As this site is in Texas the easiest way to establish benchmarks would be to follow the TCEQ guidance (RG-263 section 3.5), because it sites all of the references used in the draft RI section 3.5 and follows the same general outline used to establish benchmarks. It would also make it easier to compile and check the values that are used.	TCEQ guidance will be followed in the revised RI work plan.
56	Section 3.4.1, page 3-6		Page 3-6, Section 3.4.1: There should be more supporting documentation in order to justify the decision not to classify endangered species as a ROC. The preferred documentation is a statement from US Fish and Wildlife Service.	Letters from US Fish and Wildlife will be obtained and included in the revised RI work plan. If letters are not obtained, these species will be included in the assessment. See response to Item No. 7.
57	Figure 3-2, page 3-11	Shewmake, USEPA Ecological Risk Assessor	Page 3-11, Figure 3-2: In the conceptual site model the path from bank soil to shorebirds, waterfowl, and mammals is shown as incomplete or potentially complete. This pathway would probably be complete unless there is a site-specific reason that exposure is not possible. Please explain why these pathways are shown as incomplete.	The CSM will be reviewed to determine whether it should be modified based on the current understanding of the site. Revisions will be included in the revised RI work plan.
58	Section 3.6.1, page 3-12	Shewmake, USEPA Ecological Risk Assessor	Page 3-12, Section 3.6.1: Describing the area affected by dredged sediments as "comparatively small compared to the overall size of the site" is not sufficient to show that there is no pathway from the contaminants to mammalian receptors. The site is large and comparatively small could mean anything.	This change will be incorporated in the revised RI work plan.

Item No.	Reference	Comment made by	Comment	Response
59	Section 3.6.1, page 3-12	Shewmake, USEPA Ecological Risk Assessor	On page 3-12, Section 3.6.1 it states that, for this risk assessment, the use of the word sediment will be limited to include only substrates that are permanently submerged and that substrates that are intermittently submerged will be classified as wetland soil. If wetland soil is going to be evaluated separately then how is it going to be evaluated (soil, sediment or both)? It may be appropriate to evaluate terrestrial receptors against soil and aquatic receptors against sediment. This all depends on how frequently the area is inundated. The methods used to evaluate wetland exposure need to be explained.	See response to Item No. 6.
	Section 4			
60	WP, Page 4-1, § 4.1, Problem Formulation	Forsythe, US Fish & Wildlife Service	Suggest using the term "refinement" of COPECs rather than "elimination."	This change will be incorporated in the revised RI work plan.
61	WP, Page 4-1, § 4.1, Risk Management	Forsythe, US Fish & Wildlife Service	Should include that preliminary remediation goals (PRGs) will be calculated and used to guide risk management decisions.	The risk calculation is the outcome of the Tier 1 work.
62	WP, Page 4-3, § 4.2, 1st sentence	Forsythe, US Fish & Wildlife Service	Suggest changing "reasonable" to "less conservative."	This change will be incorporated in the revised RI work plan.
63	WP, Page 4-5, § 4.6	Forsythe, US Fish & Wildlife Service	Objective is to reduce risks to acceptable levels (PRGs).	See response to Item No. 61.
	Section 5, Human He	ealth Risk Assessment (H	HRA)	
64	Section 5.1, Page 5-1	Sarah Schreier, TCEQ	Please be aware that for soils only, the TRRP Rule requires the site assessment to delineate contamination to Tier 1 Residential assessment levels. A commercial/industrial land use may be applied when performing a response action at the site, however, concentrations of COPCs may not exceed residential standards on off-site properties without written landowner concurrence for the associated institutional control. Please be aware that the TCEQ will require the human health screening levels for each COPC to be at least as protective as the Assessment Levels described in TRRP.	The assessment work will be conducted in accordance with current land use characteristics. If and when a potential response action is planned, landowner concurrence for any institutional control will be obtained.
65	Section 5.1, Page 2-2	Sarah Schreier, TCEQ	This section provides general criteria to be used in the development of an initial list of COPCs. It appears that there are differences in some of the criteria outlined in this section and the screening criteria outlined in Section 350.71(k) of the TRRP Rule. Please be aware that the TCEQ will insist that COPCs that do not explicitly meet the screening criteria outlined in 30 TAC §350.71 be retained for further evaluation.	See response to Item No. 15.
	Section 6, Sampling	& Analysis Plan		
66	Figure 6.1	Shewmake, USEPA Ecological Risk Assessor		Several additional samples will be obtained from the locations along Jefferson Canal that are suspected as dredged materials. See responses to Item No. 21 and Item No. 46.
67	Figure 6.1	Shewmake, USEPA Ecological Risk Assessor	It is difficult to evaluate the sampling plan without more detailed maps and pictures. Figure 6.1 has blurred text in both the electronic and print copies. Larger higher resolution maps should be provided. A map with landmarks, roads, and potential sources of contamination labeled should be provided. It would also be good to have pictures with and without the color enhancement.	This change will be incorporated in the revised RI work plan.
68	Section 6	Shewmake, USEPA Ecological Risk Assessor	This plan does not include any soil sampling from the banks of the canals except in areas where contaminated sediment has been deposited. This sampling plan should include soil sampling on the banks of the canals in areas where elevated water levels could have carried contamination.	See responses to Item No. 21, Item No. 46, and Item No. 66.

Item No.	Reference	Comment made by	Comment	Response
69	Section 6	Shewmake, USEPA Ecological Risk Assessor	It would be easier to develop a sampling plan, and describe this site if the site were broken into multiple AOC's with similar characteristics. For example wetlands, canals, and contaminated bank soil. This is a large site to assess as a single area of concern.	This exemplifies the use of the "tiered" approach. Development of areas of concern will occur in subsequent tiers, if needed.
70	Section 6.1.2, page 6-1	Shewmake, USEPA Ecological Risk Assessor	Page 6-1, Section 6.1.2: The description of the DQO process in this section is not adequate. While the DQO process for a SLERA is abbreviated, the information used to determine the number of samples, and the questions that are being answered by this study should be presented in greater detail.	A formal DQO process will be amplified in the revised RI work plan.
			Was a formal Data Quality Objective (DQO) process conducted? This DQO is too vague to be meaningful.	See response to Item No. 70.
71	Section 6.1.2	Sarah Schreier, TCEQ	There is an apparent inconsistency between the stated objectives of the Tier 1 Investigation in this Section and in Section 1.1. In this Section, it is stated that the objective includes collection of data adequate to determine nature and extent of contamination, for use in the Screening-Level Ecological Risk Assessment (SLERA), and for use in the Tier 1 HHRA. In section 1.1, the purpose is to collect data to determine the nature of contamination, data for conducting the SLERA, and to determine if an HHRA is necessary. Please clarify.	See response to Item No. 72.
			Data collected for extent needs to be adequate to meet the substantive requirements of an Affected Property Assessment as described under 30 TAC §350, and applicable TRRP guidance.	See response to Item No. 64 and Item No. 72.
72	Section 6.2.1	Sarah Schreier, TCEQ	This entire section is inadequate for development of a comprehensive picture of the site.	The SAP will be revised, improved, and clarified. However, the RI work plan describes only the Tier I work, and therefore is not intended to develop a comprehensive characterization of the site. Additional work is planned to follow in subsequent tiers, if needed. See response to Item No. 8.
73	Section 6.2.1.3, page 6-2	Shewmake, USEPA Ecological Risk Assessor	Page 6-2, Section 6.2.1.3: This section needs to be expanded to cover patterns of drainage from contaminated bank soil and discuss any water bodies connected to the canals. It should also discuss flooding and how tidal flow affects currents in the area. The description of water flow should be adequate to locate all of the areas potentially affected by hydrologic transport of contaminants.	All water bodies as outlined in the AOC are being investigated. Patterns of drainage and tidal flow will be described in greater detail in the revised work plan.
74	Section 6.2.1.5	Sarah Schreier, TCEQ	Quantify "significant depths." At what depth is groundwater used in this area, or is public and the majority of private water supply drawn from surface water?	The revised work plan will address the items cited. The revised RI work plan will include an explanation on the "use" of groundwater.
75	Section 6.2.1.6	Sarah Schreier, TCEQ	Cultural Resources typically refer to any artifactural remains over 50 years old, not current recreational use. Please cite your references used to determine that the area was not known to be used by native population, or early Texans.	
76	Section 6.2, pg 6-2	Larry Champagne, TCEQ Remediation Division	The referenced Appendix D did not appear to be included in the work plan.	Reference to Appendix D was an error and was addressed in the errata submittal of 2-4-06.
77	Section 6.2.2, page 6-3	Larry Champagne, TCEQ Remediation Division	While sample numbers and locations are discussed in this section, it is unclear what type of sampling design was used for this RI. Samples do not appear to be evenly dispersed through the wetland along Star Lake Canal. There is an inlet area approximately halfway down the length of the canal to the southeast that has no proposed sampling in or near it. This represents a data gap that needs to be addressed. The same situation applies to the pond in the extreme southeast corner of the site. As stated earlier, the text on page 2-2 indicates the existing historical data will be excluded entirely from the RI work and it is unclear if and how historical data may have been utilized in developing the proposed sampling plan. Please address the role of historical data in the current proposed sampling strategy. Also see applicable comments above regarding the term "wetland soil."	See response to Item No. 3 and Item No. 8.

Item No.	Reference	Comment made by	Comment	Response
78	Section 6.2.2, page 6-3	Shewmake, USEPA Ecological Risk Assessor	Page 6-3, Section 6.2.2: The use of the term wetland soil to describe soil samples from dredged material placed on the banks of the canal is not used consistently throughout these documents. In the CSM (fig 3-2) and food web (fig 3-3) this soil is referred to as bank soil. Unless this soil is part of a wetland or intermittently submerged then it should be referred to as bank soil throughout the entire document. If all of this soil is going to be evaluated as wetland soil and none of the samples are considered bank soil then the CSM, food web, and all references to bank soil in the rest of the document should be modified to reflect this.	
79	§ 6.2.2 Page 6-3,	Forsythe, US Fish & Wildlife Service	To provide additional fate information, suggest collecting the general water quality measurements at the same depth as that of the sample (mid-depth); in addition to the surface.	This change will be incorporated in the revised RI work plan.
80	Section 6.2.2, page 6- 3 and pg 6-6	Larry Champagne, TCEQ Remediation Division	Please elaborate on the purpose of the mid-depth and refusal-depth sediment samples. Also, please discuss how a 6-inch depth will be obtained with a grab sampler when the SOP states that penetration depth will not be more than a few centimeters. Finally, how will the significant differences in sampling methodology between the grab sampler and the vibracore tube (eg., blow-out from the grab) affect the comparisons of surface samples?	
			Please clarify how "reasonably likely accumulation points" were identified.	Additional tiers of sampling are planned. See response to Item No. 3 and Item No. 4.
			This work plan in general does not appear to address definition of the extent of contamination. Please revise to address this deficiency.	See response to Item No. 72.
81	Section 6.2.3	Sarah Schreier, TCEQ	If it is determined that a groundwater investigation is within the scope of this project, then that needs to be addressed in the sampling plan.	See response to Item No. 4.
			TCEQ has some concern that decontamination procedure for the water samplers as contemplated in this section may not be adequate to guard against cross-contamination.	See response to Item Numbers 85, 86, 88, and 94.
82	Section 6.2.3, pg 6-4	Larry Champagne, TCEQ Remediation Division	The sample point configuration criterion for wetland soils identifies known dredged material banks and wetland areas of accumulated re-suspended sediment and/or erosion materials from the dredge site as the sole factors for sampling. The dredge material reflects the relocation of sediments originally contaminated in-situ. This same deposition that resulted in contaminated sediments within Jefferson Canal is also a potential transport and depositional mechanism that justifies sampling Molasses Bayou. Please include primary deposition of contaminated sediments in the criteria for all of Molasses Bayou. The existing rationale for selection and distribution of samples for the Molasses Bayou matrix, identified within the work plan as "wetland soils," is inadequate. Please include a more detailed explanation. Also see applicable comments above regarding the term "wetland soil."	
83	Page 6-5 , Figure 6-1	Larry Champagne, TCEQ Remediation Division	The central western portion of Molasses Bayou is devoid of samples but shows two consecutive interconnected open water bodies connected to the main channel. These appear to be potential primary sediment depositional areas. Please add a minimum of two samples in this area or provide rationale for omitting this area from sampling. Also see comment above regarding additional clarification on sampling design and data gaps. The sample point configuration criteria references wetland soils. See applicable comments above.	
84	Section 6.2.4	Sarah Schreier, TCEQ		Lancaster Laboratories, Inc. has a substantial track record of success in sample collection and shipment.

Item No.	Reference	Comment made by	Comment	Response
85	Section 6.3.1	Sarah Schreier, TCEQ	It appears that surface water samples will be collected after sediment samples. Are there any concerns about turbidity and suspended sediments in the surface water resultant from the sediment sampling skewing the surface water sample results? A few, but not all of the ecological benchmarks are based on dissolved concentrations. Will both filtered and unfiltered aliquots be collected, and how will they be differentiated in sample labeling? I'd like to see specific samples designated for Matrix Spike/Matrix Spike Duplicate (MS/MSD) in the work plan to ensure that adequate sample volume is collected at those locations. It is critical that site specific MS/MSDs are run to ensure data quality.	Surface water samples will be collected prior to sediment samples. Samples will not be filtered. MS/MSD will be completed as standard sample collection protocol.
86	Section 6.4	Sarah Schreier, TCEQ	This section provides a discussion on the locations identified for the collection of sediment samples. It appears that only surface sediment samples are proposed to be collected from the Gulf States Canal and from Molasses Bayou. Please be aware that the detection of COPCs above applicable screening levels in these surface sediment samples may compel deeper sediment samples in this area. Vibracore sampling is described as going to refusal. However, the description of sample segregation of mid depth from refusal depth samples assumes that refusal will be reached at 18 inches. Please clarify what intervals will be sampled as mid depth and refusal depth if refusal is significantly deeper, and if refusal depth is significantly shallower than 18 inches. In the latter case, how will adequate sample volume be assured?	Refusal depth depends upon the characteristics of the sediments. From each vibracore sample, the top, middle and lower portion of the soil, to refusal, will be sampled. If the sediments are unable to be penetrated by the vibracore sampler then the documentation will reflect the sediment characteristics.
87	Section 6.4	Sarah Schreier, TCEQ	In the discussion on Gulf States Canal and on Molasses Bayou, please briefly discuss the reasoning behind sampling surface sediments only in these locations. Clarify whether surface sediment samples will be collected from vibracore or from grab samples in areas where multiple sample depths are planned. There is an apparent inconsistency in the work plan on this point. Please include the users manual for the vibracore and for the surface water smaller employed in the appendices to the work plan.	t
88	Section 6.4, page 6-6	_	Page 6-6, Section 6.4: If the sediment is collected in the same location as surface water, and water is collected mid channel then is it possible that the samples could be collected from an area that has been dredged? If dredging is occurring in the canals then this should be considered when selecting locations for sediment sampling. We need to know to location and frequency of dredging to ensure that this sampling plan is adequate.	Clarification will be provided in the revised RI work plan. Effort will be made to sample in locations that "have not been dredged". See response to Item No. 21.
89	Section 6.4	Shewmake, USEPA Ecological Risk Assessor	The sampling plan should discuss the collection of samples to be used as a background and describe the rational for selecting that location as a background.	See response to Item No. 3.
90	Section 6.4	Shewmake, USEPA Ecological Risk Assessor	Please clarify and give rationale for the proposed sample numbers. Was some statistical evaluation of the needs performed? Also, from the text it appears that all of the samples would be considered biased, or at best, haphazard. Will this sampling design limit the utility and statistical strength of the investigation?	See response to Item No. 3.
91	Section 6.4, pg 6-7	Larry Champagne, TCEQ	Please provide additional justification of how five sediment samples collected from 14,700 feet of Star Lake Canal (averaging 3675 ft. between locations), four samples from 4600 feet of Jefferson Canal (averaging 1533 ft. between locations), and three samples from 9000 feet of Jefferson Canal (averaging 4500 ft. between locations) will be sufficient to adequately characterize the sediments in these canals.	The work plan uses a tiered approach. Additional samples may be collected in subsequent tiers. See response to Item No. 3.
92	Section 6.5	Sarah Schreier, TCEQ	This section states that surface sediment samples will be collected at 12 locations. The TCEQ assumes this statement to be a typo and the correct number of sediment samples proposed to be collected in wetland soils is 18.	Agreed. The RI work plan will be revised accordingly.

Item No.	Reference	Comment made by	Comment	Response
110,11101	regerence	Comment made og	The sediment sampling design will probably define the areas most likely to have been	See responses to Item No. 3, Item No. 19 and Item No. 91.
93	§ 6.5 Page 6-6	Forsythe, US Fish & Wildlife Service	impacted, but it's not clear it will provide enough information to define the nature and extent of contamination. Suggest adding sampling locations in the Neches River, both upstream and downstream of the confluence with Star Lake Canal.	See respondes to helicition of helicition 15 und helicition 51.
94	§ 6.6 Page 6-6	Forsythe, US Fish & Wildlife Service	Not in agreement that duplicate sediment and soil samples are impossible. They are commonly collected via homogenization of the original bulk sample.	Homogenization of the sample can result in significant modifications to the sample results, especially if analysis is for volatile compounds. No homogenization of samples is planned.
	QAPP			
95	QAPP, Section 2.1	Steven Childress, TCEQ	I am unable to locate the project org chart referenced in the first paragraph as Figure 2-1. Please be advised that this org chart is a required QAPP element per Section 3.2.4 of the EPA QA/R-5 document entitled "EPA Requirements for Quality Assurance Project Plans."	1 , 9
96	QAPP, § 2.4.1.1 Page 2-7	Forsythe, US Fish & Wildlife Service	The sampling design can maximize representativeness via statistical approaches (random, stratified random, etc.), based on current knowledge or estimated variances.	See response to Item No. 3.
97	QAPP, § 2.4.1.3 Page 2-10	Forsythe, US Fish & Wildlife Service	As a tier 2 activity, I suggest the collection of fiddler crabs for ecological considerations, rather than the blue crab. The blue crab might be more applicable to the HHRA.	Blue crabs are documented at the site and have been observed being ingested by shorebirds. This organism can and should be used for both the ERA and HHRA. Clarification will be provided in the revised RI work plan.
98	QAPP Section 2.4.1.6	Steven Childress, TCEQ	The last paragraph states that the labs will report detected results to the MDL for each sample result and results between the MDL and the reporting limit (RL) will be qualified as estimated with a "J" flag for organics and a "B" flag for metals. If the RL as defined in this QAPP is synonymous with the method quantitation limit (MQL) as defined in the TRRP rule (i.e., the lowest non-zero concentration standard in the laboratory's initial calibration curve based on the final volume of extract or sample weight used by the lab), then the reporting conventions specified in this QAPP will substantively meet the data reporting requirements given in 30 TAC 350.54(h)(l) of the TRRP Rule. If the RL as defined in this QAPP is not synonymous with the MQL as defined above, then the labs will need to modify their reporting conventions in order to fully comply with the data reporting requirements specified in the TRRP Rule.	The laboratory will report down to the MDL (this is a "pooled statistical" value that is lower than the "reportable" MDL). TCEQ defines the MDL for TRRP as the statistical MDL. For example, if Lancaster has 4 GC/MS VOC instruments running 8260 and they have statistical (40 CFR Part 136 App B) MDLs of 0.09, 0.08, 0.06, and 0.05, then Lancaster would report the statistical pooled MDL as 0.10ug/L which is acceptable under the TRRP criteria. Lancaster will not reference a limit of quantitation (LOQ) anywhere, but would reference an MQL as listed in this comment. Lancaster MQLs are equal to the lowest non-zero point in the calibration curve and are fully compliant with this requirement. Also, labs are required to analyze quarterly detectability check sample (DCS) confirmation standards on each instrument and for each matrix to confirm MDLs, and Lancaster is fully compliant with this requirement as well. Lancaster will J flag organics and inorganics for any concentration that is between the MDL and MQL as required by TRRP.
99	QAPP Section 2.4.1.6	Steven Childress, TCEQ	Again in the "Sensitivity" Section 2.4.1.6, please be advised that 30 TAC 350.54(h)(2) required all non-detected results to be reported as less than the value of the sample quantitation limit (SQL) as defined in the TRRP Rule (I.e., the method detection limit adjusted to reflect sample-specific actions such as dilutions, use of a smaller aliquot for analysis, percent moisture for soil and sediment results, etc.), not the MDL as stated in the last paragraph of this section.	Sample results will be reported to the SQL as listed in the TRRP rules. The SQL is the MDL adjusted for sample factors such as percent moisture, sample aliquot size, dilutions, etc. If the TRRP MDL is 0.10ug/L and Lancaster does a dilution of 10x the SQL will be 1.0ug/L. Lancaster will also report the unadjusted MDLs in the TRRP-13 data deliverables as required by TRRP.
100	Section 2.6.3 Laboratory Records	Steven Childress, TCEQ	I believe that the lab records included most of the required "reportable data" as defined in the RG-366/TRRP-13 regulatory guidance <i>Review and Reporting of COC Concentration Data</i> with the exception of the Laboratory Review Checklist and the laboratory duplicate data. If the laboratory case narrative and associated exception report are sufficiently detailed in documenting any QC nonconformances and problems/anomalies, then the case narrative will essentially serve the same purpose as the Laboratory Review Checklist. However, if there is reason to believe that the level of detail provided in the case narrative will not be comparable to what would be provided in the TCEQ Laboratory Review Checklist, then my recommendation would be to revise Section 2.6.3 "Laboratory Records" to require the laboratories participating in this project to submit the Laboratory Review Checklist as part of the standard data package deliverable.	Lancaster will report the required TRRP-13 data deliverables that will include the LRCs/ERs (Lab Review Checklist / Exception Reports)

Item No.	Reference	Comment made by	Comment	Response
101	Table 3-1		In Table 3-1 "Required Sample Containers, Preservation, and Holding Times for Surface Water and Sediment/Soil Samples," the technical holding time for water sample matrices analyzed for TPH by Method TX 1005 is 14 days from extraction to analysis for aqueous samples that have been acid preserved to a pH of less than 2, (not 7 days).	TX 1005 has a holding time of 14 days from extraction to analysis for aqueous samples that are preserved. TX 1006 has the same holding time. If performing a sequential analysis of TX 1005 (determine the results), then TX 1006, the lab only has 14 days from extraction to complete both analyses, so the TX 1005 will be tested on a rush turnaround time.
102	QAPP, Page 3-7, Table 3-3	Forsythe, US Fish & Wildlife Service	As a tier 2 activity, I suggest the collection of fiddler crabs for ecological considerations, rather than the blue crab. The blue crab might be more applicable to the HHRA.	Blue crabs are documented at the site and have been observed being ingested by shorebirds. This organism can and should be used for both the ERA and HHRA. See response to Item No. 97.
103	Section 5.3	Steven Childress, TCEQ	Since the data validation summary report as described in Section 5.3 "Reconciliation with User Requirements" of this QAPP will contain a Usability Assessment portion which will evaluate the usability of the data in terms of meeting the project-specific DQOs, I believe that this "data validation summary report" is comparable in scope to the TRRP-13 Data Usability Summary (DUS) Report deliverable not only in documenting the results of the technical review and data validation but also in evaluating the ultimate usability of the data for the project.	An evaluation of the data validation requirements is being prepared. This change will be incorporated in the revised RI work plan.
	Appendix C, Standar	d Operating Procedures (SOPs)	
104	SOP for Containers, Preservation, Handling, and Tracking of Environmental Samples Section 3.4, second bullet.	Sarah Schreier, TCEQ	Please revise the work plan text to indicate that in addition to the requirements of the SOP, the chain-of-custody form must include list of analyses to be performed for each sample.	The chain-of-custody will have a list of analyses. This change will be incorporated in the revised RI work plan.
105	SOP for Sediment Sampling Section 3.1.1, item 2.	Sarah Schreier, TCEQ	Please revise the work plan text to indicate that in addition to the requirements of the SOP, GPS coordinates for the sample location must be recorded in the field logbook, when appropriate.	This change will be incorporated in the revised RI work plan.
106	SOP for Sediment Sampling Section 3.2.1, item 8.	Sarah Schreier, TCEQ	Please clarify under what circumstances it is appropriate to collect a composite sample.	Grab sampling techniques will provide adequate sample sizes so that no composite samples are proposed or planned at this time.
107	SOP for Sediment Sampling Section 3.4.1, eighth bullet.	Sarah Schreier, TCEQ	Please provide criteria to determine when it is necessary to place core catchers in the end of the core liner.	This change will be incorporated in the revised RI work plan.
108	SOP for Sediment Sampling Section 3.4.4 18th and 20th bullet	Sarah Schreier, TCEQ	These bullets describe the procedures for collection of the upper 15 cm of sediment. This is inconsistent with Section 6.4.1 of the Work Plan which states that "the collection of surface sediment samples (0-6 inch depths) will be conducted using a grab sampler, an Ekman or Ponar dredge." In addition, it is not clear in the SOP if any additional procedures are required when collecting sediment samples at depths greater than 15 cm. Please revise the work plan text to clearly describe the sediment sampling protocol at the site, ensuring that the clarifications requested above are addresses, and indicating any points at which the sampling procedures to be used at the site deviate from those described in the SOP.	This change will be incorporated in the revised RI work plan.